

CLAIMS

WHAT IS CLAIMED IS:

1. A coding assisting equipment comprising:

operating-object holding means for sequentially holding  
5 each word respectively consisting of plural bits, and of  
constant word lengths;

argument holding means for holding an argument that  
should be applied to an operation that is performed on a word  
that is subsequently held by said operating-object holding  
10 means, and that is included in said word being held by said  
operating-object holding means and/or the result of an  
operation performed in advance on the word being held by said  
operating-object holding means; and

operation means for performing, as said operation, in  
15 accordance with logical values of individual bits that are  
included in said word being held by said operating-object  
holding means and said argument being held by said argument  
holding means, coding that is defined as a logical operation  
to be performed on a combination of said logical values.

2. A decoding assisting equipment comprising:

operating-object holding means for sequentially holding  
each word respectively consisting of plural bits, and of  
constant word lengths;

argument holding means for holding an argument that  
25 should be applied to an operation that is performed on a word  
that is subsequently held by said operating-object holding  
means, and that is included in said word being held by said  
operating-object holding means and/or results of an operation  
performed in advance on the word being held by said  
30 operating-object holding means; and

operation means for performing, as said operation, in  
accordance with logical values of individual bits that are  
included in said word being held by said operating-object  
holding means and said argument being held by said argument  
35 holding means, coding that is defined as a logical operation  
to be performed on a combination of said logical values.

3. A coding assisting equipment according to claim 1,

wherein said operating-object holding means is fed with, as said words, pieces of transmission information divided into units of said constant word lengths, and wherein said operation means divides said transmission information by a generator polynomial in which a degree of the highest term is smaller than or equal to said word length.

4. A decoding assisting equipment according to claim 2, wherein said operating-object holding means is fed with, as said words, pieces of received sequence divided into units of said constant word lengths, and wherein said operation means divides said received sequence by a generator polynomial in which a degree of the highest term is smaller than or equal to said word length.

5. A coding assisting equipment according to claim 1, wherein said operating-object holding means is fed with, as said words, pieces of transmission information divided into units of said constant word lengths, and wherein the operation means tree encodes said transmission information with a constraint length that is shorter than said constant word length.

6. A coding assisting equipment according to claim 3, wherein said operating-object holding means is fed with transmission information that is divided into an integer N of words and is added (an) invalid bit strings(s) to one or both of the most significant end and/or the least significant end, and wherein said operation means excludes said invalid bit string(s) from the operation objects.

7. A coding assisting equipment according to claim 3, wherein said operating-object holding means is fed with transmission information that is divided into an integer N of words and is added (an) invalid bit strings(s) to one or both of the most significant end and/or the least significant end, and wherein the operation means employs, as an operation object, valid bit(s) of word(s) that is/are fed as said transmission information and include said invalid bit string.

8. A coding assisting equipment according to claim 1, further comprising word length adjusting means for converting

an operation result that is obtained by said operation means into a sequence of words having a constant word length, and for sequentially supplying the words to a subsequent operation means for performing a predetermined operation.

5 9. A coding assisting equipment according to claim 3, further comprising word length adjusting means for converting an operation result that is obtained by said operation means into a sequence of words having a constant word length, and for sequentially supplying the words to a subsequent operation  
10 means for performing a predetermined operation.

10. A coding assisting equipment according to claim 5, further comprising word length adjusting means for converting an operation result that is obtained by said operation means into a sequence of words having a constant word length, and  
15 for sequentially supplying the words to a subsequent operation means for performing a predetermined operation.

11. A coding assisting equipment according to claim 6, further comprising word length adjusting means for converting an operation result that is obtained by said operation means  
20 into a sequence of words having a constant word length, and for sequentially supplying the words to a subsequent operation means for performing a predetermined operation.

12. A coding assisting equipment according to claim 7, further comprising word length adjusting means for converting  
25 an operation result that is obtained by said operation means into a sequence of words having a constant word length, and for sequentially supplying the words to a subsequent operation means for performing a predetermined operation.

13. A decoding assisting equipment according to claim 2,  
30 further comprising word length adjusting means for converting an operation result that is obtained by said operation means into a sequence of words having a constant word length, and for sequentially supplying the words to a subsequent operation means for performing a predetermined operation.

35 14. A decoding assisting equipment according to claim 4, further comprising word length adjusting means for converting an operation result that is obtained by said operation means

into a sequence of words having a constant word length, and for sequentially supplying the words to a subsequent operation means for performing a predetermined operation.

15. A radio transmitter comprising:

operating-object holding means for sequentially holding each word respectively consisting of plural bits, and of constant word lengths;

argument holding means for holding an argument that should be applied to an operation that is performed on a word that is subsequently held by said operating-object holding means, and that is included in said word being held by said operating-object holding means and/or results of an operation performed in advance on the word being held by said operating-object holding means;

operation means for performing, as said operation, in accordance with logical values of individual bits that are included in said word being held by said operating-object holding means and said argument being held by said argument holding means, coding that is defined as a logical operation to be performed on a combination of said logical values; and wireless interfacing means for transmitting the result of said operation performed by said operation means to a radio transmission channel.

16. A radio receiver comprising:

wireless interfacing means for demodulating a radio-frequency signal reached through a radio transmission channel, and for dividing transmission information that is given as said radio-frequency signal into words each consisting of plural bits and of a constant word length and for outputting the words;

operating-object holding means for sequentially holding said words that are output from said wireless interfacing means;

argument holding means for holding an argument that should be applied to an operation that is performed on a word that is subsequently held by said operating-object holding means, and that is included in said word being held by said operating-object holding means and/or the result of an

operation performed in advance on the word being held by said operating-object holding means; and

operation means for performing, as said operation, in accordance with logical values of individual bits that are included in said word being held by said operating-object holding means and said argument being held by said argument holding means, coding that is defined as a logical operation to be performed on a combination of said logical values.